

Annotated Checklist of the Vascular Plants of Newfoundland and Labrador – 2019

Susan J. Meades and Luc Brouillet

Introduction

For any botanist, the Province of Newfoundland and Labrador (NL) is a fabulous place to work or visit. It offers a large variety of habitats, a fairly diverse flora composed of Temperate, Boreal, and Arctic elements, large expanses of wilderness mainly untouched by development, and a rich history of excellent botanists who have visited this Province and beautifully described the plant species and communities that occur here. M.L. Fernald was certainly the most influential botanist to visit our shores, travelling here from Harvard with his students, Bayard Long, Harold St. John, and Karl Wiegand, several times between 1899 and 1933, discovering most of our endemic flora, and naming countless new species (see Fernald 1914, 1916, 1924, 1925, 1926; Fernald & Wiegand 1913). Fortunately for us, he left behind a very detailed and thoroughly engrossing account of the field crew's travels in Newfoundland and Labrador in his numerous articles in the botanical journal *Rhodora* (Fernald & Sornborger 1899, Fernald 1911, 1926, 1933). Fernald also identified the plants collected and painted by Mrs. Agnes M. Ayre for her *Wild Flowers of Newfoundland* book (Ayre 1935). But Fernald's most lasting legacy was the 8th edition of *Gray's Manual of Botany* (Fernald 1950), which he unfortunately never saw in print, as he died earlier that same year. The 1970 corrected printing of the 8th edition (Fernald 1970) is the version from which many, if not most, English-speaking botanists in eastern North America learned their botany.

Often referred to as the Father of Botany in Newfoundland and Labrador, Fernald's legacy may be the largest, but he was not the first botanist to visit our Province. The excellent contributions of early explorers, naturalists, and botanists, starting with Banks in 1766 (Lysaght 1971), then Cormack (1823), Bachelot de la Pylaie (1824, 1829), E. Meyer (1830), J.M. Macoun (1891, 1896, 1899), Rev. A.C. Waghorne (1895, 1898a-b), and Robinson & Schrank (1896) were also well documented in their publications and others' accounts of their work (Brassard 1980, Bruton 1928, South 1970, Lysaght 1971).

In the 20th century, such well-known botanists as Delabarre (1902), Wetmore (1923), Abbe (1936, 1938, 1955), Gardner (1937, 1946), Hustich (1939, 1949, 1951, 1963, 1965, 1969, and Hustich & Pettersson 1944, 1945), Polunin (1940, 1948), Gillett (1954, 1960, 1963), J. Rousseau (1952, 1968), Hultén (1958, 1962, 1971), Ahti (1959, 1980), Hämet-Ahti (1971, 1980a, 1981, 1986), and Porsild (1973), contributed greatly to our understanding of the Labrador flora and arctic elements of the Newfoundland flora. The bryophyte and lichen floras were also well documented by Polunin (1947), Ahti (1983), and Brassard (1983, Brassard & Williams 1975).

More recently, several Québec botanists had a major influence on our knowledge of the Newfoundland flora, including Pierre Morisset (1971, Morisset *et al.* 1987) from Laval Univ., and Ernest Rouleau (1949, 1956, 1978) from the Univ. of Montréal, followed by his student, André Bouchard (Bouchard *et al.* (1976, 1978, 1985, 1986, 1987, 1991, 1992), and Bouchard's students, Stuart Hay (Hay *et al.* 1990, 1992, 1994) and Luc Brouillet (Brouillet *et al.* 1997), who produced an amazing amount of information on the flora of western Newfoundland and Gros Morne National Park, in particular.

Scientists with the Newfoundland office of the Canadian Forest Service also contributed greatly to the knowledge of our flora and plant communities. The combined works of A.W.H. (Ton) Damman (1963, 1964, 1965, 1967, 1976, 1979), W.C. Wilton (1965), F.C. Pollett (1972, Pollett *et al.*, 1970, 1973, 1980), W.J. Meades (1973, 1975, 1983, 1986, 1987, W.J. Meades & Moore 1989), E.D. (Doyle) Wells (1981, 1983a; Wells *et al.* 1983b-c, 1996), and B.A. Roberts (1983, 1985) contributed to the development of the *Ecoregions of Nfld.* (Damman 1970, 1983), and the *Ecoregions of Labrador* (W.J. Meades 1989, and pages 251-321, in: S.J. Meades 1990). Two other botanists whose contributions should also be recognized are I.J. Green (1984), who worked with the Dept. of Agriculture, and Orville A. Olsen (1980), a biology professor at Memorial University who taught many of our Province's current botanists.

Some prominent American ecologists who conducted research on the forest and peatland communities of Labrador included F. Harper (1964), and D.R. Foster, P.H. Glaser, and G.A. King (Foster 1984, 1985; Foster & Glaser 1986; Foster & King 1984, 1986; and Glaser & Foster 1984).

Botanists from various consulting firms, such as Northland Associates, AGRA, Jacques-Whitford, and Stantec, have also played a large role in exploring regions of the Province seldom seen by most people. While their names do not appear as authors of these reports, field botanists such as Brent Keeping, Sean Bennett, Mike Crowell, Mike MacDonald, Susan Meades, Richard LaPaix, and Marion Sennen are responsible for many of the recent new species reports and range extensions in Labrador (Minaskuat Ltd. 2007, Stassinu Stantec Ltd. 2010, 2013).

Another excellent source of information of range extensions and new species are the many professional and enthusiastic local botanists who participated in field trips organized by the Newfoundland Wildflower Society (newsletter: *Sarracenia*) and the Newfoundland Natural History Society (newsletter: *The Osprey*), including long-term members Henry Mann, John Maunder, Todd Boland, Michael Burzynski, Anne Marceau, Howard Clase, Glenda Quinn, Carmel Conway, Ross Traverse, Andrus Voitk, Michael Collins, Luise Hermanutz, June Titford and her late husband, Bill Titford. Particular thanks and gratitude should be given to Henry Mann, who has dedicated many years to documenting the flora of western Newfoundland, building the SWGC herbarium, and teaching countless budding botanists at MUN's Grenfell Campus; and to John Maunder, who has documented and kept track of new reports and introductions, both ephemeral and naturalized, across the Province in his *Digital Flora of Newfoundland and Labrador*. Also, no discussion of the flora of Gros Morne National Park (GMNP) would be complete without recognizing the continuing contributions of Michael

Burzynski and Anne Marceau in exploring, documenting, and sharing/interpreting their knowledge of the GMNP Flora with fellow botanists, as well as the general public (Burzynski 1999, 2018, Burzynski, Mann, & Marceau 2016).

Locations of collections made in insular Newfoundland by many of the botanists mentioned above have been plotted on distribution maps and compiled in an atlas by Rouleau and Lamoureux (1992), while a similar atlas of Labrador plants, although based on a limited number of collections, was compiled by R. Day (1995, 1998). Also, John Maunder's *Digital Flora of Newfoundland and Labrador* (2012+) should be mentioned again, as it provides a wonderful reference of images and recent locations for much of our flora.

Between 1999 and 2001, many local botanists, some new to the Province at the time, and volunteers, participated in field surveys of the Newfoundland Rare Plant Project (NFRPP), including Claudia Hanel, Nathalie Djan-Chékar, René Charest, Marilyn Anions, Carson Wentzell, Beth Pollock, Laurence Lavers, and Leah Soper. Details of their discoveries and a full list of participants is provided in Djan-Chékar *et al.* (2004). Claudia Hanel, one of our 'new' and most enthusiastic field botanists, continued these explorations, resulting in many new finds, re-discoveries, and range extensions (Hanel 2004, 2005a, 2005b) on both sides of the Strait of Belle Isle. As the current generation of Newfoundland botanists retires, local herbarium collections at Memorial University's St. John's (NFLD) and Corner Brook Campus (SWG), as well as the Provincial Museum's 'The Rooms' (NFM), are now being actively and enthusiastically curated by Julissa Roncal (NFLD), Dmitry Sveshnikov (SWG), and Nathalie Djan-Chékar (NFM). We look forward to more excellent work from each of these dedicated individuals in the future!

As you can see, this latest version of the *Annotated Checklist of the Vascular Plants of Newfoundland and Labrador* is not just the work of the listed authors, but a cumulative effort of every naturalist and botanist, named and unnamed, who contributed to our knowledge of the Province's flora.

History of the Checklist

Following Fernald's accounts of the flora in *Rhodora*, Dr. Ernest Rouleau published a new checklist for the Province (Rouleau 1949), which was expanded in 1956. In 1978, Oxen Pond Botanic Garden published a third update, *Rouleau's List of Newfoundland Plants*, which represented 22 years of field and herbarium study of the Newfoundland flora by Rouleau. This publication soon became an indispensable reference of all botanists and many naturalists in Newfoundland and Labrador.

Over the years, much of the nomenclature has changed and several new botanical discoveries have been made by researchers and naturalists in Newfoundland. Also, some species previously reported from the province have been shown not to occur here. These errors were based largely on misidentifications of existing herbarium material or by misapplication of some

names. The 2000 revision of Rouleau's checklist (Meades *et al.* 2000) incorporated changes in the nomenclature, new reports, and appendices for species excluded from the flora.

It is the intention of the authors to provide as complete and accurate account of the vascular flora of Newfoundland and Labrador as possible. When an herbarium record existed for a questionable report, the identity could be checked. However, some erroneous reports originate from accounts in the early literature. When no herbarium record was reported in this literature and no subsequent proof has been found of the existence of the species in question within the reported range, these accounts have been rejected and the names moved to one of the 2 appendices. While it is easy to verify the presence of a species in a given area through herbarium records, it is more difficult to rule out a report. If any mistakes have been made, corrections will be gratefully accepted. In such cases, researchers are requested to provide information from the herbarium label and details of the report to the authors.

Research and compilation of the revised checklist was started in 1995 by the primary author, Susan J. Meades, with the assistance of Dr. Stuart Hay, Université de Montréal. Later, a provincial list of accepted names, compiled by Dr. Luc Brouillet, Université de Montréal, was provided for comparison. These two lists have been combined to produce the current checklist, a collaborative effort of the authors. Additional information on Labrador distributions was obtained from a series of unpublished maps of distributions within Labrador, compiled by Ernest Rouleau and housed at the Université de Montréal. Some new reports, previously unreported, have resulted from field work conducted by the authors and their colleagues in recent years. Also, many new herbarium records and reports have been provided by John Maunder (Newfoundland Museum) and Henry Mann (Sir Wilfred Grenfell College, Memorial Univ. of Newfoundland). The accuracy of new provincial reports was checked at the Université de Montréal Herbarium by Stuart G. Hay (now retired) and Luc Brouillet. Also, many verified reports have been provided by the researchers listed in the acknowledgements. Unfortunately, funding was not available to allow most specimens in other herbaria to be checked. Following Stu Hay's retirement, updates to this checklist will be published by the two current authors, Susan Medes and Luc Brouillet.

For the 2000 version of the checklist, the accuracy of complex groups and verification of ranges was checked, whenever possible, with the recognized specialist in that group. But in the last 15 years, much more research is available online, facilitating the checking of names and ranges. There have also been many more changes in nomenclature and classification since 2000, particularly at the family level and above - the result of recent molecular level studies done by contemporary researchers. For Canada, the most important change in our ability to learn about nomenclatural changes and species ranges is the availability of *Canadensys*, generally known as **VASCAN**, the *Database of Vascular Plants of Canada* (Brouillet *et al.* 2010+); see: <http://data.canadensys.net/vascan/search/>. For the vast majority of species listed in the current checklist, the nomenclature follows VASCAN, which presents nomenclatural changes based on the most recent research. For a few genera, where current research is not universally accepted and the proposed changes are inconsistent with the traditional concept of the genus

(genera as closely related, easily recognizable groups that share differentiating morphological features), the primary author has decided to retain more commonly accepted genus names, such as *Coeloglossum* in the Orchidaceae, *Glaux* and *Trientalis* in the Primulaceae, and *Triadenum* in the Hypericaceae (now accepted in FNA, vol. 6: 102, Robson 2015). Other authors may disagree, but time will tell whether or not these broader-concept changes become universally accepted. For these species, the latest scientific names are included in the synonymy list of each species.

Elements of the Annotated Checklist

To make the revised checklist more useful, common names, provincial status, range, and major synonyms have been included. Some entries also include an annotation with information on scarcity, range extensions, nomenclatural problems, or questionable reports. Below, is a sample entry for one species. Features of the checklist are noted by the numbers (1-14). Brief explanations for each item are followed by more detailed explanations.

Braya fernaldii¹ Abbe²

En: Fernald's braya, Fernald's rockcress³; **Fr:** braya de Fernald⁴; **IA:**⁵, **IU:**⁶.

Brassicaceae/Brassicacées – Mustard Family⁷

Provincial Status: **N**⁸

Range: Newfoundland endemic⁹; nwNfld.¹⁰; calc.¹¹

[=Braya americana (Hook.) Fernald *p.p.*¹² (type: Cape Norman, nwNfld.¹³)]

[=Braya purpurascens (R.Br.) Bunge var. fernaldii (Abbe) B.Boivin]

[The reference in Fernald (1950: 712) to another species of *Braya* from the Northern Peninsula likely refers to densely villous plants of *Braya fernaldii* that are diseased (possible viral infection). Plants of *B. fernaldii* with sterile, infected shoots and fertile, normal shoots have been found on the same plants in populations at Watt's Point (Meades 1996b). *Braya fernaldii*, classified as rare in Nfld. and 'threatened' in Canada, is found in frost-disturbed areas of limestone barrens along the coast of the Great Northern Peninsula (Bouchard *et al.*, 1991).]¹⁴

^{1,2} Scientific name and authorities.

^{3,4,5,6} Common names in English (En), French (Fr), Innu-Aimun (IA), and Inuktitut (IU).

⁷ Plant family name

⁸ Provincial Status: present in Labrador (L) or Newfoundland (N).

^{9,10} General global range and provincial distribution.

¹¹ Specific habitat preferences, if restrictive.

¹² Synonymy, including basionym, when applicable.

¹³ Type location - if the type specimen was described from a NL specimen.

¹⁴ Annotation: notes about known locations, questionable reports, or taxonomic problems.

Scientific Names and Authorities

Within the checklist, accepted scientific names appear in **bold** letters. The Latin binomial is followed by the scientific authority - the person who described the species. In some instances, a name or combination has been published by more than one authority at different times. For example: Hultén (1968) and Scoggan (1978) list the authorities of *Minuartia rubella* as (Wahlenb.) Graebn., while other references use (Wahlenb.) Hiern. Literature research shows that (Wahlenb.) Hiern is the correct citation, since Hiern published this combination in 1899 [*Jour. Bot. (Lond.)* 37: 320, 1899], prior to Graebner's work on *Minuartia*, which was published in 1918 [*Syn. Mitteleur. Fl.* 5(1): 727, 1918]. When two or more different authorities are seen in the literature, both names, along with publication dates, have been included in this checklist so the reader will know which authority is correct and which should be rejected. The latter name is considered to be an illegitimate later isonym of the earlier described name. Abbreviations for authorities follow the standards used in IPNI's, *Authors of Plant Names*. The example given above appears in synonymy in this checklist, under *Sabulina rubella*, as follows:

Minuartia rubella (Wahlenb.) Hiern

Minuartia rubella (Wahlenb.) Graebn. 1918, *nom. illeg. isonym., non* (Wahlenb.) Hiern 1899

Common Names

The inclusion of common names was considered an important part of this checklist. While professional botanists are comfortable with scientific names, there are increasing requests from amateur naturalists, tourists, and local people to provide common names for our flora. The common names used in this checklist were obtained from many sources, the most useful of which were *Gray's Manual* (Fernald 1950) and *Newcomb's Wildflower Guide* (Newcomb 1977) for English names, and *Flore Laurentienne* (Marie-Victorin 1995) and the *Fleurbec* series for French names. Many other manuals and Internet sites were consulted to find existing names. For the most part, common names that appeared in the 2000 version of the checklist have been retained in the current checklist, except where nomenclatural changes have mandated a change or clarification in the common names.

Mr. Marc Favreau, Translator/Language Advisor with the Department of Science and Technologies, Translation Bureau, Public Works & Government Services of Canada, reviewed all the French common names for accuracy and provided necessary corrections for the 2000 checklist, and contributed many additional French common names through his work with VASCAN for the current checklist. When an appropriate common name could not be located by the authors, Mr. Favreau researched these names, coined names for species lacking a common name, and added a few names unique to the islands of St. Pierre and/or Miquelon (SPM). The accuracy of these names has been greatly improved by Marc's careful attention to detail and his understanding of the nuances of the French, English, and Latin languages.

Since common names are not regulated in the same manner as scientific names, there is no 'one accepted' common name that should be used over all others. Common names also vary from one province to another, based on the type of habitat in which the plant occurs. For example, the common name 'upland willow' is more appropriate for *Salix humilis* in NL than the common name 'prairie willow.' In this checklist, we provide those common names found in botanical references most often used locally, as well as local names that are unique to our province. For example, **bakeapple** is the Newfoundland name for *Rubus chamaemorus*, and **chuckleyppear** is the name for any/all species of *Amelanchier*. In situations where the local NL name is used for a different species in other parts of Canada, the area where each name is most commonly used is given in parentheses. For example, under *Vaccinium vitis-idaea*, the following common names appear: partridgeberry (NL); mountain cranberry, foxberry (mainland Canada), lingonberry (Scandinavia); Fr: airelle rouge, berri (SPM).

Provincial Status

A species' presence in Labrador and/or insular Newfoundland is denoted, below the Family Name, by the abbreviation '**L**' for Labrador and '**N**' for the Island of Newfoundland. The abbreviation '**LN**' denotes a species that is found in both portions of the Province. If a report has not yet been confirmed, a question mark '?' is placed *prior to* the appropriate region, i.e., **?LN** indicates that the species' presence in Labrador is doubtful, but its presence is confirmed from insular Newfoundland.

When **LN** is listed as the Provincial Status, the species is considered native in both portions of the province. If the species is not native, a lower case qualifier, 'i', is placed after the **L** or **N** to designate this species as introduced. When a species is introduced in both parts of the Province, the 'i' appears after both abbreviations: **LiNi**; if the species is introduced in only the mainland or island portion of the province, the 'i' is placed directly after the appropriate abbreviation: **LNi** (here indicating that the species is native in Labrador, but introduced in insular Newfoundland). When an introduction was ephemeral (short-lived rather than continuous), the abbreviation '**e**' is used in place of 'i' to identify its status. Ephemeral species have not become naturalized and many disappear after a single growing season. Some ephemerals may be repeat introductions, such as grass species that are introduced in birdseed or with agricultural crops. These species are not considered part of the Provincial flora.

In other sections of the checklist (i.e., Range and Annotation), the standard abbreviation '**NL**' is used when referring to the entire Province of Newfoundland and Labrador, while the abbreviation '**Lab.**' is used for Labrador and '**Nfld.**' is used for insular Newfoundland.

Range

The general range (i.e., circumpolar, boreal, temperate) is provided for each species, followed by its range within Newfoundland and Labrador. See **Figures 1** and **2** for maps of the Province. and the abbreviations used to denote range.

Figure 1. Range abbreviations within Labrador:

- w** - western Labrador, west of and adjacent to the northern and southern Labrador regions.
- n** - northern Labrador, north of the Churchill River Basin.
- c** - central Labrador, primarily the Lake Melville/Churchill River Basin.
- s** - southern Labrador, west & south of the Churchill River Basin.
- se** - southeast Labrador, primarily the Strait of Belle Isle area.

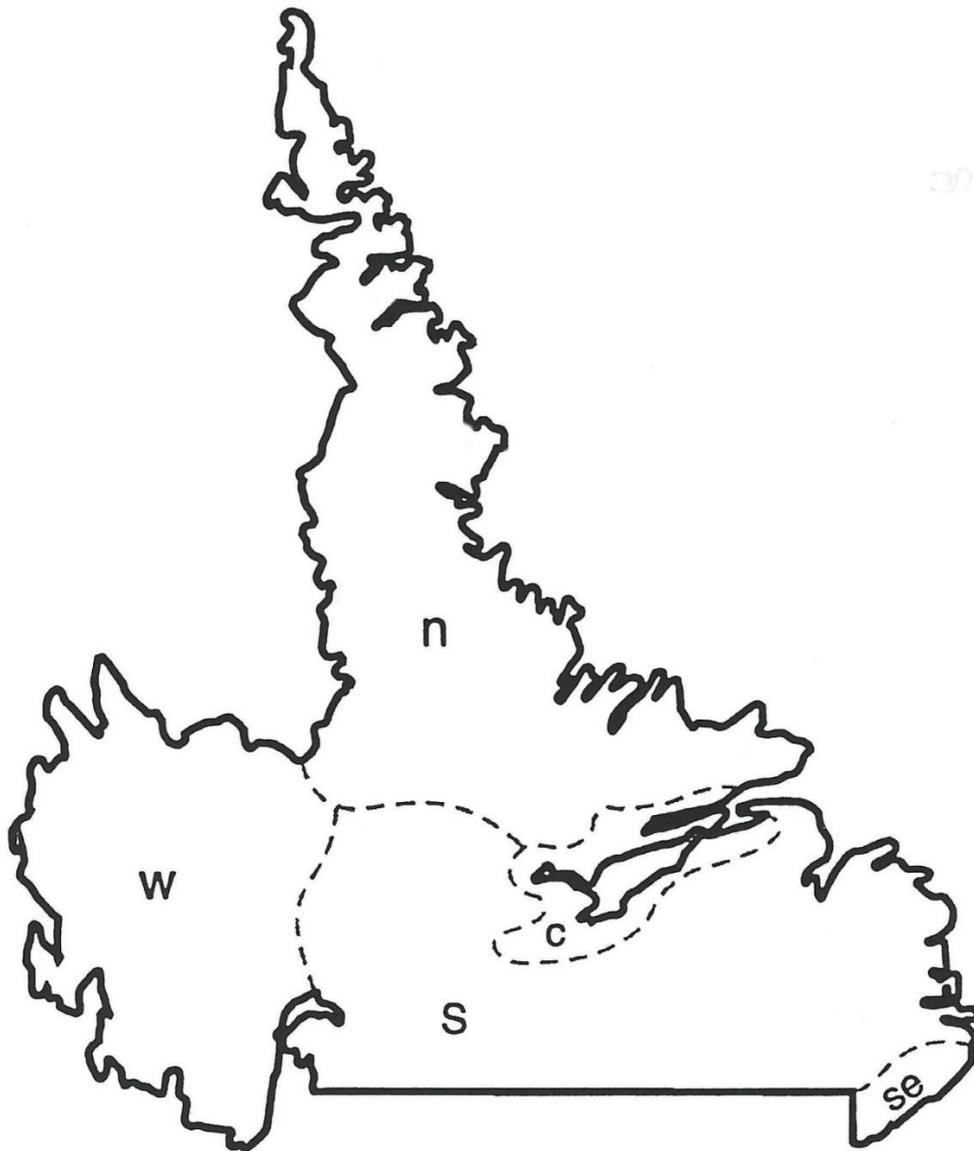
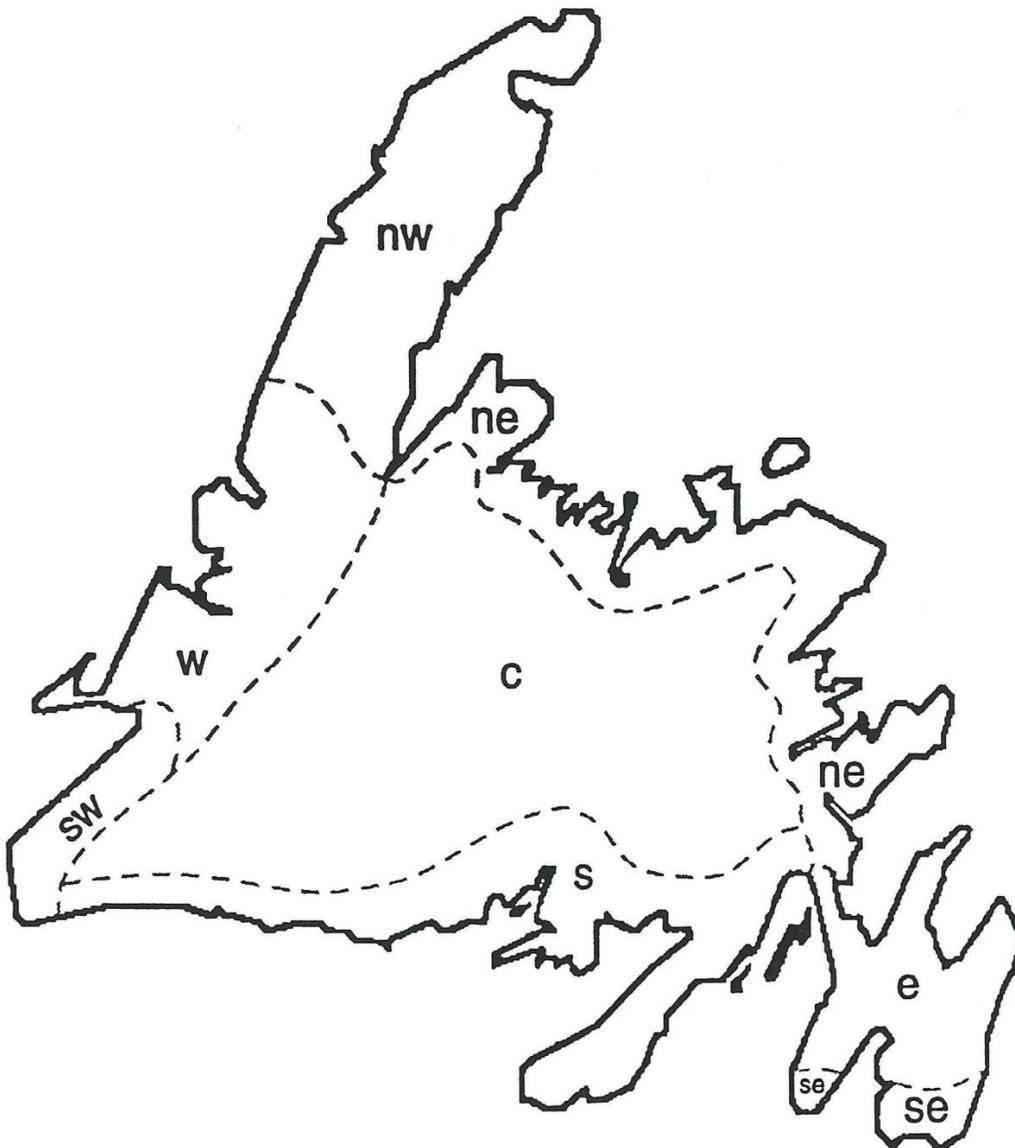


Figure 2. Range abbreviations for insular Newfoundland:

- sw** - southwest Nfld., from S of the Port au Port to Channel-Port aux Basques.
- w** - western Nfld., from the N boundary of Gros Morne National Park (GMNP), extending S to the base of the Port au Port Peninsula.
- nw** - northwest Nfld., the Great Northern Peninsula, extending N from the N end of GMNP.
- ne** - northeast Nfld., from White Bay E to the Isthmus of Avalon.
- c** - central or interior Nfld.
- s** - southern Nfld., from Channel-Port aux Basques E, through the Burin, to the Isthmus.
- e** - eastern Nfld. includes the Avalon Peninsula and the Isthmus of Avalon.
- se** - southeast Nfld. includes the southern-most portions of the Avalon Peninsula.



A species' range within Newfoundland and Labrador is strictly a reflection of herbarium collections and published records. Ranges may be more extensive than indicated here, and additional accounts, accompanied by verifiable proof, are welcomed by the authors.

Range Abbreviations

The following abbreviations are used in the range descriptions:

NA - North America	N - North
SA - South America	S - South
CA - Central America	E - East
temp. - temperate regions	W - West
trop. - tropical regions	disj. - disjunct distribution
NL - the entire Province	intr. - introduced
Lab. - Labrador only	occ. - occasionally
Nfld. - insular Newfoundland only	thr. - throughout

Abbreviations used for ranges within the province are described below, with the boundaries of each region outlined on the two corresponding maps. Geographic subdivisions of the Province used in this checklist are for convenience only; they do not correspond, except in a general sense, to ecoregions or floristic zones. For descriptions and information on the *Ecoregions of insular Newfoundland*, see Damman (1983); for Labrador, see W.J. Meades' *Ecoregions of Labrador*, in: S.J. Meades (1990).

Specific Habitat Preference

Habitat preference, if characteristic of the species, is listed after the range information.

- acid.** - usually restricted to acidic substrates, such as acidic bogs or soils derived from granitic bedrock.
- alk.** - usually restricted to alkaline substrates; basic soils, often clay, with a high salt concentration.
- aq.** - restricted to fresh water aquatic habitats, such as ponds or streams.
- bas.** - usually restricted to basic substrates, such as soils derived from basalt, limestone, or peridotite.
- calc.** - usually restricted to calcareous or basic substrates, e.g. limestone or dolomite.
- hal.** - usually restricted to coastal habitats influenced by salt water, such as salt marshes, brackish water, and sea beaches.
- nit.** - usually restricted to nitrogen-rich substrates, such as bird cliffs.
- serp.** - usually restricted to ultrabasic and ultramafic substrates, e.g. serpentine barrens.
- snowbeds** - usually restricted to alpine snowbeds or snowmelt areas.

Synonymy & Identification Resources

The synonyms included under each species were compiled from several online sources, including the following primary references. URL's for each website are included in the bibliography.

Canadensys (VASCAN) (Brouillet *et al.* 2010+)

FNA (*Flora of North America*, 1993-2018+)

IPNI (International Plant Name Index, 2012)

Tropicos (Tropicos.org 2015)

GRIN (USDA, ARS 2009)

Index Synonymique (Kerguelen 1999)

When trying to identify plants collected in our province, a variety of texts are often used. The multi-volume reference, *Flora of North America* (FNA) has superseded Scoggan's *Flora of Canada* (1978) as the main reference with descriptions and keys to the flora of Canada. However, not all volumes of this series have been published yet. Some people prefer to use the illustrated '*Britton and Brown*' (Gleason 1952) or Gleason and Cronquist's (1963, 1991) *Manual of Vascular Plants of Northeastern U.S. and Adjacent Canada*, but these references do not cover northern species, which make up a good portion of our flora, particularly in Labrador. The most comprehensive text, *Gray's Manual of Botany* (Fernald 1950, 1970) covers most of the Province's flora, including the Newfoundland endemics described by Fernald, but excludes high-arctic elements. These species can be found in either Porsild's work on the Canadian Arctic Archipelago (Porsild 1964) or Hultén's *Flora of Alaska* (Hultén 1968). Descriptions of our Cordilleran disjuncts can be found in Porsild and Cody (1980).

Because the 1952 edition of '*Britton and Brown*' dropped many northern species, the old 1913 edition, reprinted by Dover in 1970, is used by many serious naturalists visiting Newfoundland. This three-volume work is still available online. The nomenclature in this book is much older than that found in current Gleason publications, but in some cases, it is now more useful. For example, in the *Flora of North America*, the knotweed genus, *Polygonum*, has been divided again into *Polygonum*, *Persicaria*, and *Fallopia*; some of these currently accepted names were also used in the old 1913 edition of '*Britton and Brown*.'

Synonyms are listed after the species names and range information, beginning with the basionym of the currently accepted name. Remaining synonyms are listed in alphabetical order. Whenever possible, the basionym (original name) is provided for each binomial. This feature was included to help student botanists follow nomenclatural changes. All names used in the previous version of the *Checklist* have been cross-referenced in an Index, which has been added to the current checklist.

Differences in nomenclature make comparison between the various texts rather complicated for those who do not use these references on a regular basis. To facilitate the use of different

texts, the accepted scientific names found in each of the following manuals have been included in synonymy. Not all names that appear as synonyms in each text have been included, as this would greatly increase the length of the checklist. Texts and publications that were used to obtain synonyms include:

- *The Rare Vascular Plants of the Island of Newfoundland*. (Bouchard, et al. 1991)
- *Illustrated Flora of the Northern US and Canada*. (Britton & Brown 1913 (1970 reprint).
- *Gray's Manual of Botany*, 8th edition. (Fernald 1950, reprinted 1970.)
- *Flora of North America*, Vols. 2-9, 12, 19-26. (Flora of North America Editorial Committee. 1993.)
- *The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada*, (1974 Printing), 3 Vols. (Gleason 1952).
- *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. (Gleason & Cronquist 1963, 1991).
- *Flora of Alaska and Neighboring Territories*. (Hultén 1968)
- *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland*, second edition. 2 Vols. (Kartesz 1994).
- *Newcomb's Wildflower Guide* (Newcomb 1977).
- *Illustrated Flora of the Canadian Arctic Archipelago*. 2nd ed. (Porsild 1964).
- *Vascular Plants of the Continental Northwest Territories*. (Porsild & Cody 1980).
- *Rouleau's List of Newfoundland Plants*. (Rouleau 1978).
- *Atlas of the Vascular Plants of the Island of Newfoundland and of the Islands of Saint-Pierre-et-Miquelon* (Rouleau and Lamoureux 1992).
- *The Flora of Canada*. 4 Vols. (Scoggan 1978).

In addition, names from Fernald's major publications on his Newfoundland travels, published in *Rhodora* (Fernald 1911, 1926, and 1933), are also included in the synonymy. These references still provide excellent information about the location of endemic and rare species in Newfoundland, but the nomenclature is, as expected, out of date in many cases.

Type Locations

If known, type locations are noted when the type specimen originated from a location within Newfoundland and Labrador. In many cases, the provided location is very general (i.e., Newfoundland); as more type locations are found, this information will be updated.

Annotations

Following the synonymy are notes about a species scarcity, notable range extensions, questionable reports, or taxonomic problems. Since scarcity ranks change regularly according to new information, S-ranks will not be provided in the online version of this checklist. For the 2000 checklist, the main reference consulted for scarcity ranks was *The Rare Vascular Plants of the Island of Newfoundland* (Bouchard et al. 1991), which described those species in

the Island's flora that are rare (S1, S2, S3) or historically present (SH). While habitat information about insular Newfoundland plants has been retained in the annotations, information on the status (S-rank) of rare species in the Province is not included in the checklist, but can be obtained from the Atlantic Canada Conservation Data Centre (ACCDC; URL: <https://www.flr.gov.nl.ca/wildlife/endangeredspecies/plants.html>).

Occasionally, information about the location of an herbarium specimens is provided in the notes. The standard herbarium abbreviations apply, with the exception of two Newfoundland institutions that do not have official acronyms. In this checklist, we use **NFM** to refer to the Newfoundland Museum Herbarium, St. John's Newfoundland, and **SWGC** to refer to Sir Wilfred Grenfell College Herbarium, MUN, Corner Brook, which also houses the I.J. Green agricultural collection. Other commonly used herbarium abbreviations in this checklist include **ACCDC** (Atlantic Canada Conservation Data Centre), **CAN** (Canadian Museum of Nature), **CONN** (Univ. of Connecticut), **DAO** (Dept. of Agriculture, Ottawa), **GMNP** (Gros Morne National Park Herbarium), **H** (Harvard Univ.), **MT** (Montreal Univ.), **NF-CDC** (Newfoundland and Labrador-Conservation Data Centre), **TNNP** (Terra Nova National Park herbarium), and **TRTE** (University of Toronto-Mississauga, formerly Erindale).

Appendix

An appendix is included for species that have been excluded from the provincial flora. These species fall into two categories:

- 1) **Species reported erroneously from the Province.** These species are based on misidentifications, or the reports date back to old literature references that are not supported by an herbarium record and are now considered invalid. These plants are noted in the left margin of the Appendix with [n] for 'not present in NL.'
- 2) **Cultivated and Ephemeral species.** This category includes those species that have persisted from their garden locations, but have not spread or naturalized, as well as unintentional introductions that have not persisted in the Province – introductions that cannot survive our Newfoundland winters. These plants are noted in the left margin of the Appendix with [c] for cultivated species, or [e] for ephemeral introductions.

Corrections

Comments and/or corrections to this checklist are welcome. Researchers are requested to please include label information from verified herbarium material. New reports or corrections may be sent to **Susan Meades** (sjmeades@sympatico.ca), while herbarium specimens may be sent on loan for verification to **Dr. Luc Brouillet** (Herbier Marie-Victorin, I.R.B.V., Université de Montréal, 4101 est, rue Sherbrooke, Montréal, Québec, H1X 2B2).

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